

**STANDARDS PRESENTATION  
TO  
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1

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PROPOSED STATE STANDARD,  
TITLE 8, DIVISION 1, CHAPTER 4

Amend Section 3466 to read as follows:

§3466. Intermodal Containers.

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(j) Vertical tandem lifts. The following requirements apply to operations involving the lifting of two or more intermodal containers by the top container (vertical tandem lifts or VTLs).

(1) Each employee involved in VTL operations shall be trained and competent in the safety-related work practices, safety procedures, and other requirements in this section that pertain to their respective job assignments.

(2) No more than two intermodal containers may be lifted in a VTL.

(3) Before the lift begins, the employer shall ensure that the two containers lifted as part of a VTL are empty.

NOTE to subsection (j)(3): The lift begins immediately following the end of the prelift required by subsection (j)(5) of this section. Thus, the weight may be determined during the prelift using, on the crane being used to lift the VTL, a load indicating device or a load moment device or a device that prevents an overload condition, and whatever device is used, the device must meet the requirements of Section 3472(b) of these orders.

(4) The lift shall be performed using either a shore-based container gantry crane or another type of crane that:

(A) Has the precision control necessary to restrain unintended rotation of the containers about any axis,

(B) Is capable of handling the load volume and wind sail potential of VTLs, and

(C) Is specifically designed to handle containers.

(5) The employer shall ensure that the crane operator pauses the lift when the vertically coupled containers have just been lifted above the supporting surface to assure that each interbox connector is properly engaged.

(6) Containers below deck may not be handled as a VTL.

(7) VTL operations may not be conducted when the wind speed exceeds the lesser of:

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(A) 55 km/h (34 mph or 30 knots) or

(B) The crane manufacturer's recommendation for maximum wind speed.

(8) The employer shall ensure that each interbox connector used in a VTL operation:

(A) Automatically locks into corner castings on containers but only unlocks manually (manual twistlocks or latchlocks are not permitted);

(B) Is designed to indicate whether it is locked or unlocked when fitted into a corner casting;

(C) Locks and releases in an identical direction and manner as all other interbox connectors in the VTL;

(D) Has been tested and certificated by a competent authority authorized under 29 CFR 1918.11 (for interbox connectors that are part of a vessel's gear) or Section 3473 of these orders (for other interbox connectors):

(i) As having a load-bearing surface area of 800 mm<sup>2</sup> when connected to a corner casting with an opening that is 65.0 mm wide; and

(ii) As having a safe working load of 98 kN (10,000 kg) with a safety factor of five when the load is applied by means of two corner castings with openings that are 65.0 mm wide or equivalent devices;

(E) Has a certificate that is available for inspection and that attests that the interbox connector meets the strength criteria given in Section 3466(j)(8)(D); and

(F) Is clearly and durably marked with its safe working load for lifting and an identifying number or mark that will enable it to be associated with its test certificate.

(9) The employer shall ensure that each container and interbox connector used in a VTL and each corner casting to which a connector will be coupled is inspected immediately before use in the VTL.

(A) Each employee performing the inspection shall be capable of detecting defects or weaknesses and be able to assess their importance in relation to the safety of VTL operations.

(B) The inspection of each interbox connector shall include: a visual examination for obvious structural defects, such as cracks; a check of its physical operation to determine that the lock is fully functional with adequate spring tension on each head; and a check for excessive corrosion and deterioration.

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(C) The inspection of each container and each of its corner castings shall include: a visual examination for obvious structural defects, such as cracks; a check for excessive corrosion and deterioration; and a visual examination to ensure that the opening to which an interbox connector will be connected has not been enlarged, that the welds are in good condition, and that it is free from ice, mud or other debris.

(D) The employer shall establish a system to ensure that each defective or damaged interbox connector is removed from service.

(E) An interbox connector that has been found to be defective or damaged shall be removed from service and may not be used in VTL operations until repaired.

(F) A container with a corner casting that exhibits any of the problems listed in subsection (j)(9)(C) of this section may not be lifted in a VTL.

(10) No platform container may be lifted as part of a VTL unit.

(k) Transporting vertically coupled containers.

(1) Equipment other than cranes used to transport vertically connected containers shall be either specifically designed for this application or evaluated by a qualified engineer and determined to be capable of operating safely in this mode of operation.

(2) The employer shall develop, implement, and maintain a written plan for transporting vertically connected containers. The written plan shall establish procedures to ensure safe operating and turning speeds and shall address all conditions in the terminal that could affect the safety of VTL-related operations, including communication and coordination among all employees involved in these operations.

(l) Safe work zone. The employer shall establish a safe work zone within which employees may not be present when vertically connected containers are in motion.

(1) The safe work zone shall be sufficient to protect employees in the event that a container drops or overturns.

(2) The written transport plan required by Section 3466(k)(2) shall include the safe work zone and procedures to ensure that employees are not in this zone when a VTL is in motion.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.